

## A SURVEY OF THE WEST AMERICAN ALIGENAS WITH A DESCRIPTION OF A NEW SPECIES

BY TOM BURCH

The University of Southern California

This is a report on a group of small pelecypods of the genus *Aligena* Lea, with a review of the species from the eastern Pacific, including the description of one new to science. I am indebted to Dr. Myra Keen of Stanford University for her invaluable assistance in comparing types and verifying references, to Mr. A. Petersen of the Allan Hancock Foundation, The University of Southern California, for the drawings of the new species, to Dr. Paul Bartsch and Dr. H. A. Rehder of the United States National Museum for the other figures used, and to Dr. Olga Hartman of the Allan Hancock Foundation.

### Genus **ALIGEN** . . . (C. Lea, 1843

Lea, H. C., Proc. Amer. Phil. Soc., vol. 3, p. 163, 1843 (Sept.); Trans. Amer. Phil. Soc., Ser. 2, vol. 9, p. 238, 1845.

Dall, Trans. Wagner Free Inst. Sci., vol. 3, pt. 5, p. 1175, 1900.

Genotype: *Aligena striata* H. C. Lea, 1845 (by subsequent designation, Dall, 1900) (= *A. aequata* (Conrad), 1843).

### **ALIGENA AEQUATA** (Conrad), 1843

*Amphidesma aequata* Conrad, Proc. Phila. Acad. Sci., vol. 1, p. 307, 1843 (Oct.).

*Aligena aequata* (Conrad), Dall, Trans. Wagner Free Inst. Sci., vol. 3, pt. 3, p. 919, pl. 24, fig. 8, 1895; *ibid.*, vol. 3, pt. 5, p. 1175, 1900.

This genus was originally (1843) described as follows: "Testa aequalvi, subaequilaterali, postice et antice clausa; cardine dente cardinale uno, sulco sub natibus longo, minime profundo." Two names, *A. striata* and *A. laevis*, were assigned to it, unaccompanied by figures or descriptions, but followed (1845) with characterization. Dall (1900, p. 1175) designated *A. striata* as type of the genus and placed it in synonymy with *Amphidesma aequata* Conrad (1843).

At the same time Dall recharacterized the genus as having "a rounded triangular inflated shell with only a single small anterior tooth under the beaks, separated by a gap from the surface of attachment, under the posterior dorsal margins, of an elongate

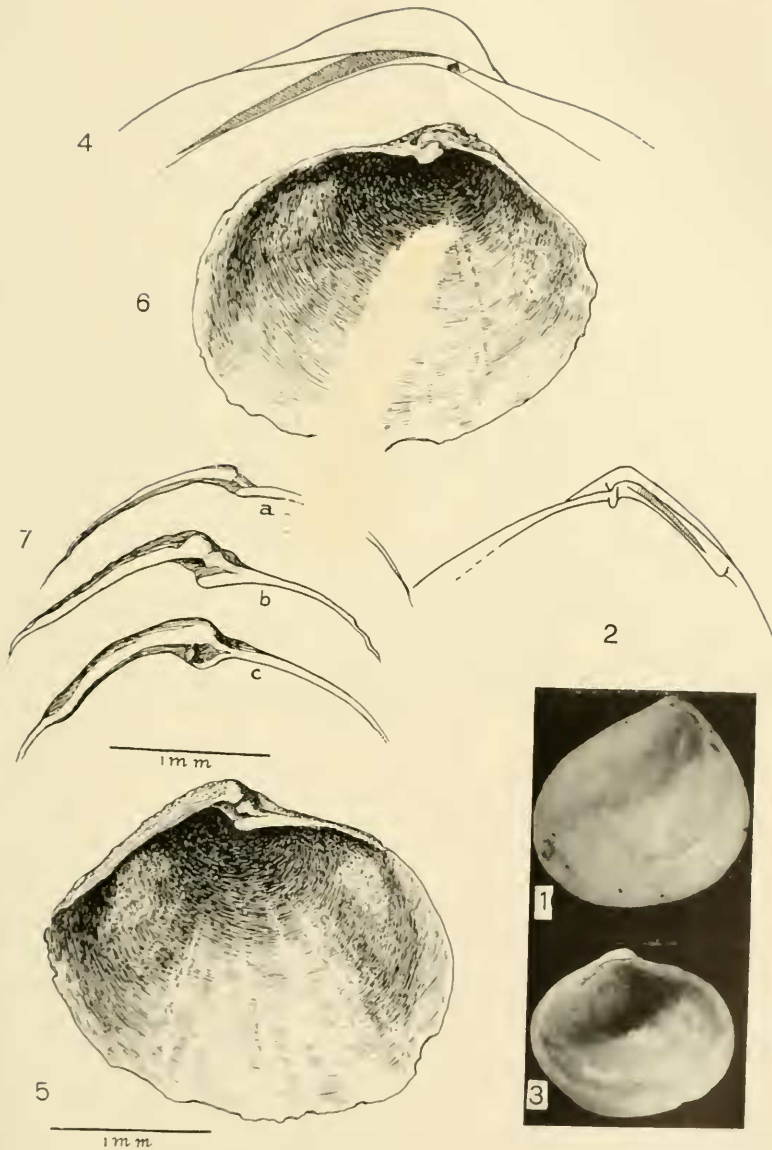


Fig. 1, *Aligena cerritensis* Arnold, type; 2, hinge of right valve. 3, *A. nucua* Dall, type; 4, hinge of left valve. 5, *A. redondoensis*, type, left valve; 6, right valve; 7, a-c, range of hinge variation.



internal resilium carrying a lithodesma. The pallial line is simple, and the cardinal of the left valve is more feeble than the other."

*Aligena* is known from the Pacific Coast of the Americas through three species—(1) *A. cokeri* Dall, (2) *A. cerritensis* Arnold, and (3) *A. nucea* Dall. A fourth, *A. redondoensis*, is now added. These species are believed to be separable as indicated in the following key:

- Shell with a median radial constriction ..... *A. cokeri*.  
 Shell without a median radial constriction.  
 Anterior part of shell sloping abruptly down..... *A. cerritensis*.  
 Anterior part of shell not sloping abruptly  
 down.  
 Posterior portion of shell sloping gently  
 down, left valve with a tooth ..... *A. nucea*.  
 Posterior portion of shell sloping abruptly  
 down, left valve edentulous ..... *A. redondoensis*.

*ALIGENA COKERI* Dall, 1909.

Proc. U. S. Nat. Mus., vol. 37, No. 1704, p. 155, pl. 28, fig. 5, 6.

This is a Peruvian species and is one of the larger species on the coast, the type measuring 7.5 mm. in length. The hinge is edentulous with a small callosity in front of the ligament. It is about the shape of *A. nucea* Dall, but has a median radial depression.

*ALIGENA CERRITENSIS* Arnold, 1903. Pl. 4, figs. 1, 2.

"Paleont. & Strat. of San Pedro," Mem. Calif. Acad. Sci., vol. 3, p. 138, pl. 13, fig. 3, 1903.

*A. cerritensis* was described from the Pleistocene of San Pedro, California, and has been reported from La Jolla, California, to Magdalena Bay, Mexico (Dall, 1921). The chondrophore of a topotype in the Stanford University Collection consists of a lamina which might almost be called a buttress, as it recedes into the shell above the posterior adductor muscle scar. The shell resembles *Acila castrensis* in outline and size. The type (figured) was described as being 8.5 mm. long and 8 mm. high. It is U.S.N.M. 162529.

*ALIGENA NUCEA* Dall, 1913. Pl. 4, figs. 3, 4.

Proc. U. S. Nat. Mus., vol. 45, No. 2002, p. 597; *ibid.*, vol. 66, art. 17, p. 2, pl. 28, fig. 2, 1925.